



All Hands Meeting

January 31 - February 1, 2007

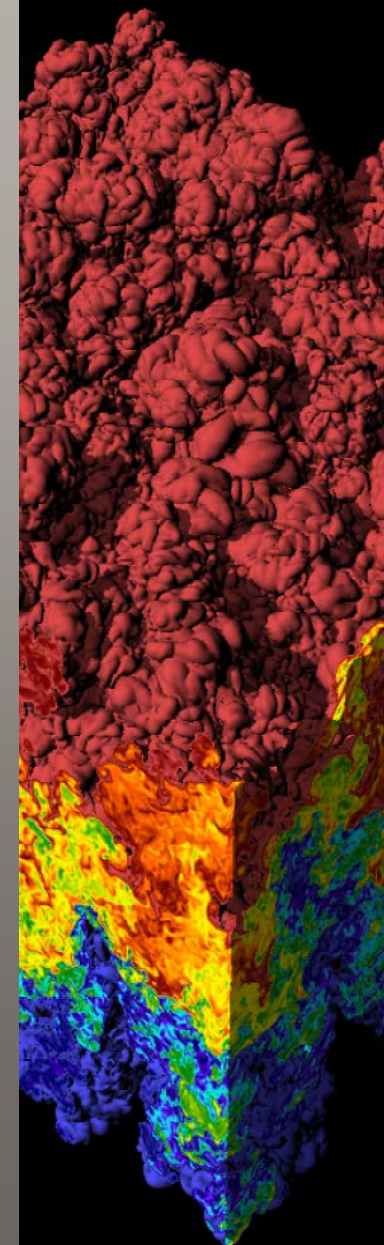
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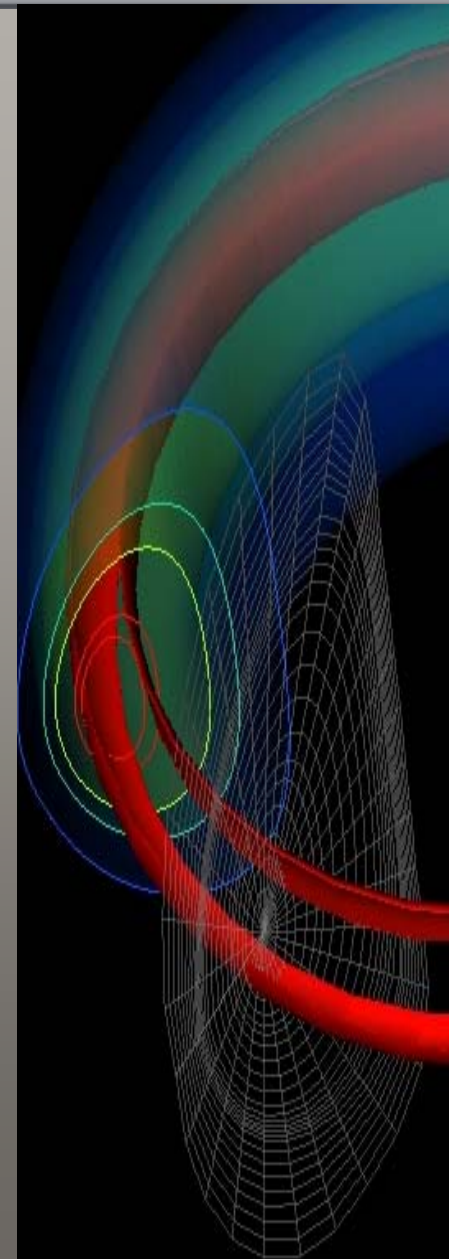
VACET Mission Statement

- Meet the Data Understanding Challenge
 - Adapt, extend, create when necessary, and deploy visualization and data understanding technology for SciDAC2 science stakeholders.
- Production-Quality and Capable Software
 - Provide production-quality visualization and analytics software infrastructure for use at DOE's flagship, open computing facilities.



Business Model

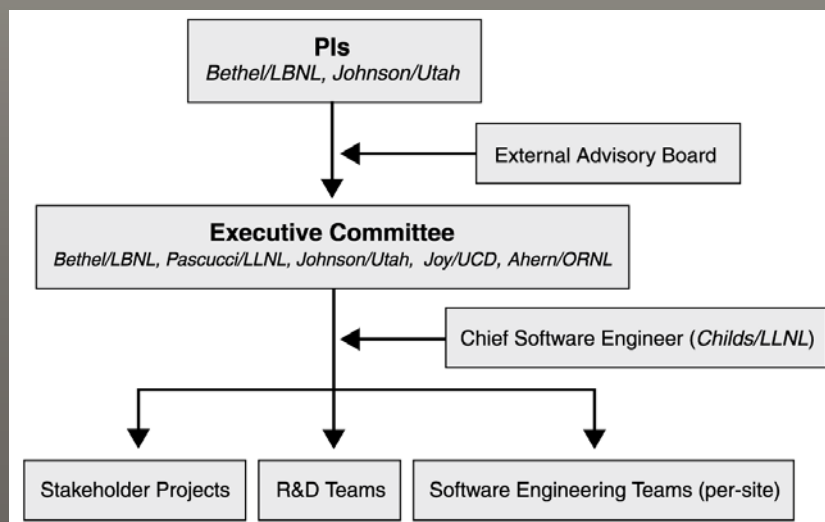
- Stakeholders from SciDAC2, INCITE and Petascale apps.
 - Stakeholder-defined needs: with stakeholders, identify and prioritize science-critical stakeholder needs.
 - Translate needs into actionable work tasks and cost estimates.
 - Basis for R&D&D schedule.



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Organization

- Stakeholder project managers
 - Point-of-contact between VACET and stakeholder.
 - Operational responsibility for delivering results that are responsive to needs and “agreement.”
- Project-wide software engineering is critical
- EC, PI (and EAB) oversight.



AHM Meeting Goals

- Actively engaged with multiple different projects.
- Currently we are **defining, prioritizing** and vetting needs (see next slide)
- Want to identify both short term and long term **high impact** projects
- Want to identify how we can best collaborate with you (science folks) to **help you succeed**.

Science Presentations

- **SciDAC2 Project Overview:** Who are your team leaders? What are the major scientific goals of your project?
- **Current Visualization and Analysis Tools:** What visualization and analysis tools do you currently use? What are the most successful tools? What is your current computational and analysis workflow? What are the current frustrations or obstacles in using your current tools? What computing platforms do you usually use for visualization and analysis?
- **Future Needs and Collaborations:** What are visualization techniques that you might like to use but don't (because of unavailability of software, etc.)? What are features that you would like to visualize (better, faster, at all) or track? How can VACET best help you better understand your data?

Two Way Success Metrics

- Are we actively engaged with our Science Stakeholders and are they actively engaged with us - it is a **two-way street!**
- Are we **deploying software** at DOE's Open Computing Facilities that addresses the data understanding needs of our stakeholders?
- Do we have meaningful interactions with other SciDAC Centers and Institute?
- Number and quality of publications. Journal articles, conference proceedings, and web-based material.



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VACET AHM Schedule

Introduction and VACET Technology Overview

08:30-08:45 Introduction, Meeting Agenda/Objectives, VACET Overview (Johnson)

08:45-10:15 VACET Presentations (10 min. each)

Research and Technology Topics

- * Topological Analysis (Pascucci)
- * Real-time Ray Tracer (Parker)
- * Volume Rendering (Hansen)
- * Embedded Boundaries (Joy)
- * Query-driven Visualization (Bethel)
- * Comparative Visualization with VisTrails (Silva)
- * Fusion/Astro Examples (Sanderson /Tricoche)

Deployment Topics

- * Rolling out Technology at NERSC/LBNL and GCS/ORNL (Bethel and Ahern)

Management Topics

- * VACET organization, working with VACET (Bethel)

10:15 - 10:30 Break

10:30 - 12:00 Fusion (Sanderson)

- * 10:30 - 11:10 -- Fusion Simulation Overview, FACETS Overview, Science Objectives, and Visualization/Analysis needs (Kruger).
- * 11:15 - 11:45 -- SWIM Overview, Science Objectives and Visualization/Analysis needs (Batchelor via delegate).
- * 11:45 - 12:00 -- Discussion.

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AHM Agenda (Continued)

12:15-13:15 Working Lunch (two speakers)

- * SDM Center Overview and VACET collaboration areas (Rotem)
- * Visit Technology Overview -- Parallel visualization, comparative visualization and analysis. (Childs)

13:15 - 13:30 Break

13:30 - 15:15 Climate (Pascucci)

- * 13:30 - 14:00 -- Earth Systems Grid Overview, Science Objectives and Visualization/Analysis needs (Williams via Drach).
- * 14:00 - 14:30 -- Coupled Climate Model Overview, Science Objectives and Visualization/Analysis needs (Drake via delegate (who is the delegate?)).
- * 14:30 - 15:00 -- Global Cloud Resolving Model Overview, Science Objectives and Visualization/analysis needs (Randall via K. Schuchardt)
- * 15:00 - 15:15 -- Discussion.

15:15 - 15:30 Break

15:30 - 17:00 Astrophysics and APDEC (Bethel)

- * 15:30 - 16:00 -- Computational Astrophysics Consortium: Spectrum Synthesis and Analysis Overview, Science Objectives and Visualization/analysis needs (Woosley via Nugent).
- * 16:00 - 16:20 -- Computational Astrophysics Consortium: Adaptive Algorithms for Modeling Supernovae Explosions (Woosley via Bell via van Straalen).
- * 16:20 - 16:45 -- Applied Partial Differential Equations Center Overview, Science Objectives, and Visualization/analysis needs (Colella via van Straalen).
- * 16:45 - 17:00 -- Discussion.

17:00 - 17:15 Break

17:15 - 18:00 Discussion, meeting wrap-up and adjourn.

18:30 Dinner at Monsoon Thai - will carpool from here.